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Software User's Guide for

the Link-11 Segment (Passive), Version 2.2.2.0 for

the Global Command and Control System (GCCS), Version 2.2

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Link-11 Introduction

The passive Link-11 interfaces available in GCCS (LINK11PEDO and LINK11PIH) provide the systems with the capability to receive Link-11 track messages.

Install the Link-11 component using the Segment Installer option in the System Administration SOFTWARE pull-down menu. Refer to the *Unified Build (UB) System Administrator's Guide* for detailed software installation instructions.

The fundamental steps for using the passive Link-11 interfaces available in GCCS are:

1. Establish and configure a Link-11 communications channel.

2. Start the Link-11 channel.

3. View the VIEW TRACK REPORT window for the received Link-11 tracks.

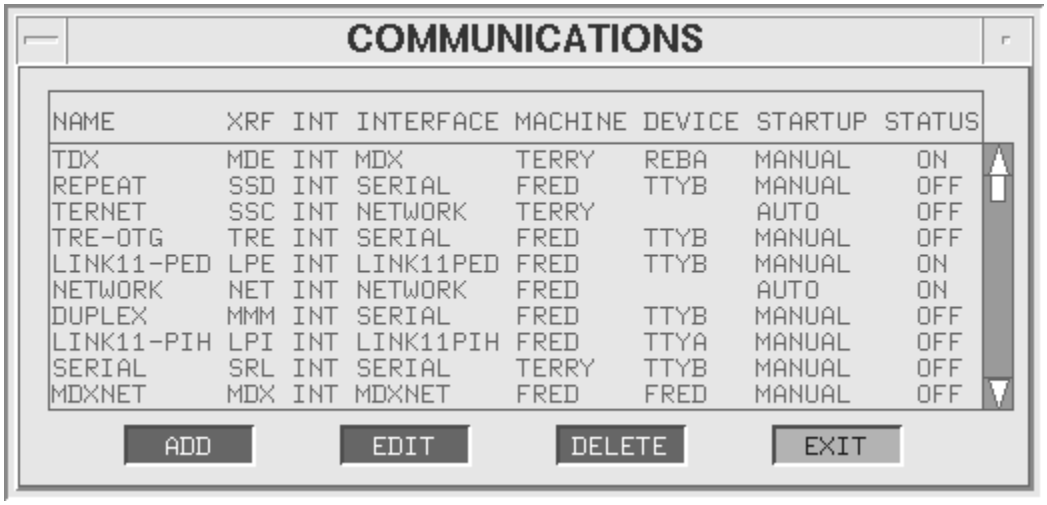
This guide explains the necessary steps to successfully use the passive Link-11 capabilities in GCCS.

Establish a Link-11 Channel

CREATE A LINK-11 CHANNEL

Use the COMMUNICATIONS option in the COMMS pull-down menu to specify settings to add, configure, start, and stop the Link-11 communications channel. For a thorough discussion of this option, refer to the Communications section of the Comms chapter in the *Unified Build User's Guide.*

To access this window: COMMS pull-down menu (GCCS) **:** COMMUNICATIONS option.

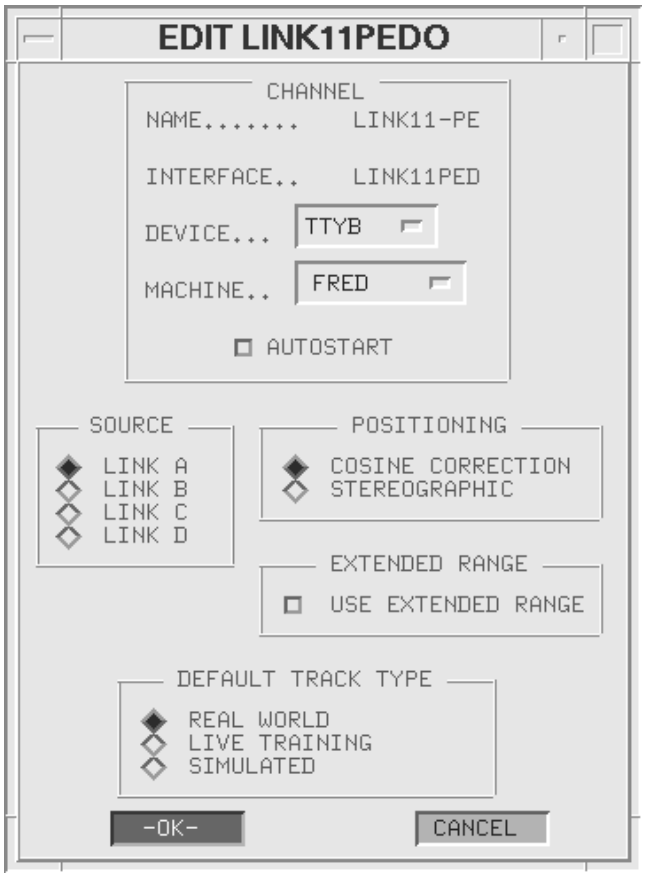


The COMMUNICATIONS window displays a list of communications channels available in the system.

- A Link-11 channel and interface must be added to this list and turned on after the Link-11 segment is loaded.
- The COMMUNICATIONS window may contain a maximum of 32 channels. An existing channel may need to be deleted before adding the Link-11 channel.
- Detailed instructions for adding a new channel can be found in the Comms chapter of the *Unified Build User's Guide.*

CONFIGURE A LINK-11 CHANNEL

To view Link-11 channel settings, highlight the Link-11 channel in the COMMUNICATIONS window and click EDIT to open the EDIT LINK11 window. The EDIT window presented below is representative the general layout on both the Link-11 PEDO and Link-11 PIH interfaces.



Edit a Link-11 Channel

After you have created a Link-11 channel in the Communications window, you must modify the channel settings as appropriate to configure it for your site requirements. Modify the Link-11 channel as follows:

1. In the CHANNEL box:
   - Click the DEVICE select button and choose a device name from the list.
   - Click the MACHINE select button and choose a machine from the list.

2. In the SOURCE box:
   - Choose one diamond knob as the Link Source.
3. In the POSITIONING box:
   - Choose one diamond knob as the method of calculating track position.
   - The transmitting unit and the receiving unit must select the same method to ensure tracks are displayed in identical positions.
   - The ADSI system uses stereographic projection to compute position. Link-11 users wishing to receive ADSI data should use a Link-11PIH interface with the PROJECTION method set to stereographic positioning
4. In the EXTENDED RANGE box:
   - Ensure the diamond knob is not selected. (See window field definition for more details.)
5. In the DEFAULT TRACK TYPE box:
   - Choose one diamond knob to define the default track type.
6. Click OK to accept the new settings or CANCEL to discard.

EDIT LINK11 Window Fields:

CHANNEL Box

NAME
Name of the channel. This field cannot be edited.

INTERFACE
Communications interface for the channel. This field cannot be edited.

DEVICE
Name of serial input device.

MACHINE
Name of the machine used to receive a message on this channel.

SOURCE Box

Designates Link source: LINK A, LINK B, LINK C, or LINK D.

POSITIONING Box

COSINE CORRECTION
Method of calculating track positions.

STEREOGRAPHIC
Alternate method of calculating track positions. Used when interfacing with ADSI systems.

EXTENDED RANGE Box

USE EXTENDED RANGE
Makes use of extended range capabilities available in other systems.

Generally, the extended range option should *never* be used in GCCS. The exception to this is if the local system is initiating a connection to a passive link source which is known to use extended range data (an example would be a Navy AEGIS platform).

DEFAULT TRACK TYPE Box

REAL WORLD
Exists in the real world.

LIVE TRAINING
Exists in the real world, but used for exercise purposes and may be assigned a different identity, such as a friendly track being identified as hostile.

SIMULATED
Does not exist in the real world; being created for exercise and scenario purposes.

Start or Stop a Link-11 Channel

To start a Link-11 channel, highlight the channel in the COMMUNICATIONS window and choose START from the pop-up menu.

To stop a Link-11 channel, highlight the channel in the COMMUNICATIONS window and choose STOP from the pop-up menu.

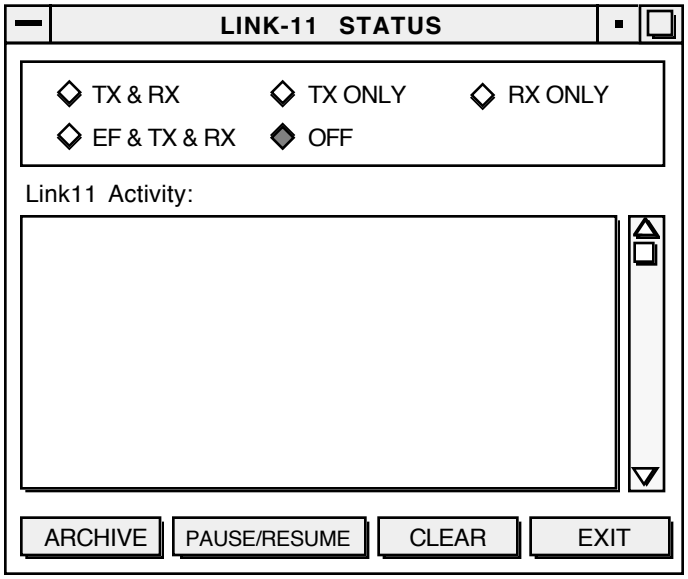
Additional Channel Options

COMMUNICATIONS POP-UP OPTIONS FOR LINK-11 CHANNEL

All pop-up options function as described in the *Unified Build User's Guide*. In addition to the standard options, the LINK-11 STATUS Window presents several additional capabilities.

LINK-11 STATUS WINDOW

Highlight a Link-11 channel in the COMMUNICATIONS window and select WINDOW from the pop-up menu to open the LINK11 STATUS window.



About the LINK-11 STATUS Window:

The LINK-11 STATUS window displays a scrolling list of messages received on the channel.

- The list holds up to 100 messages.
  - The list is automatically updated.
  - When the list contains 100 messages, the oldest messages are overwritten with new messages.
  - A blank line appears at the end of the list.
- Diamond knobs determine the type of messages displayed.
- Message contents can be viewed by clicking on a message in the list (see *View a Message*).

LINK-11 STATUS Window Actions:

➤ ARCHIVE—save the list of messages to a selected file. (Described in *Archive Files.*)

➤ CLEAR—removes all messages from the scroll list.

- EXIT—closes the window.
- PAUSE/RESUME—pauses the scrolling list, or resumes scrolling.

LINK-11 STATUS Window Fields:

For passive Link-11 use, the following options are still available in the LINK-11 STATUS window, but because the passive Link-11 may only receive track data, selecting the options which specify transmit parameters will have no effect on the window display.

TX & RX
Transmitted and received messages.

TX ONLY
Transmitted messages only.

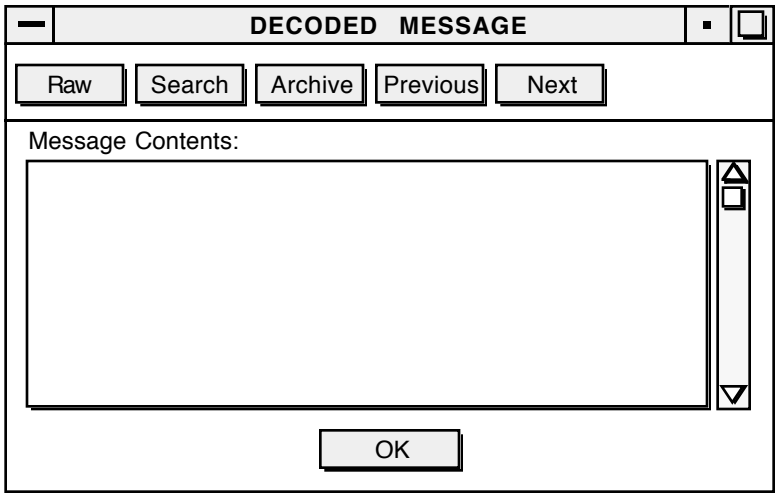
RX ONLY
Received messages only.

EF & TX & RX
External functions, received and transmitted messages. Extended functions include Prepare to Transmit (PTT) and Prepare to Receive (PTR) messages.

OFF
Link activity is not monitored.

VIEW A MESSAGE

To view the message contents, click on a message in the scrolling list of the LINK-11 STATUS window to open the DECODED MESSAGE window.

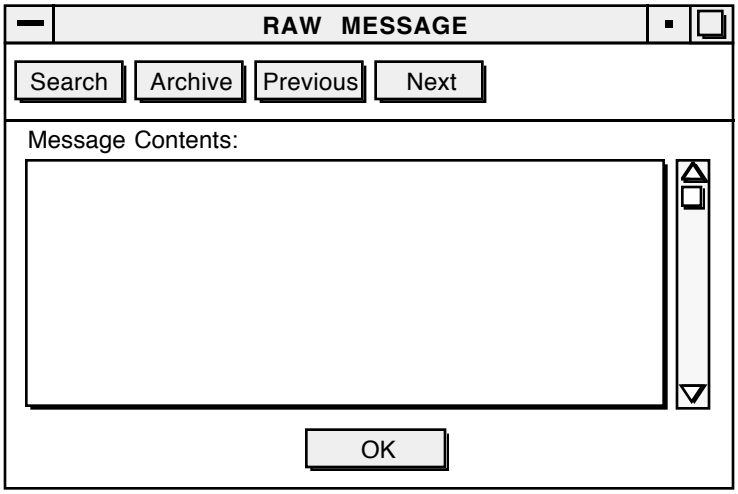


DECODED MESSAGE Window Actions

- RAW—view raw data for the message.
- SEARCH—not yet implemented.
- ARCHIVE—save the message to a selected file. (Described in *Archive Messages*.)
- PREVIOUS—view the previous message in the LINK-11 STATUS scrolling list.
- NEXT—view the next message in the LINK-11 STATUS scrolling list.
- OK—close the window.

VIEW RAW MESSAGE DATA

To view raw data for the selected message, click RAW in the DECODED MESSAGE window to open the RAW MESSAGE window.



RAW MESSAGE Window Actions

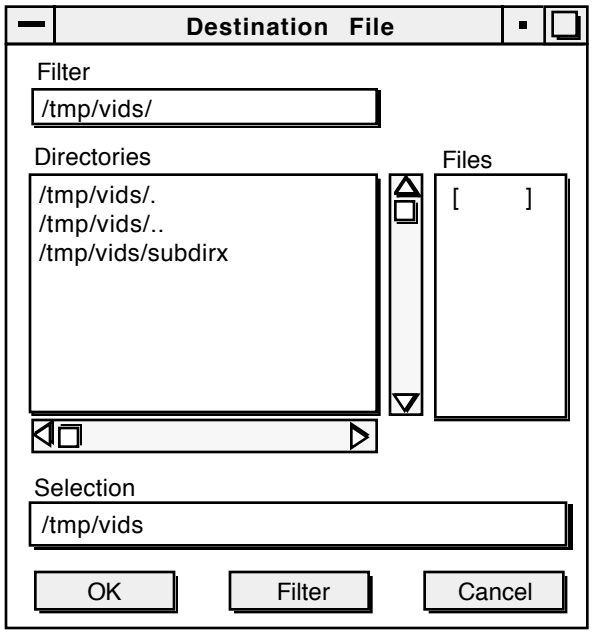
- SEARCH—not yet implemented.
- ARCHIVE—save the raw message to a selected file. (Described in *Archive Messages*.)
- PREVIOUS—view the previous message in the LINK-11 STATUS scrolling list.

➤ NEXT—view the next message in the LINK-11 STATUS scrolling list.

➤ OK—close the window.

ARCHIVE MESSAGES

Click ARCHIVE to open the DESTINATION FILE window.



About the DESTINATION FILE Window:

- Messages can be archived to a user-defined file in the default directory or to a user-defined directory and file.
  - The default directory is /tmp/vids.
  - This directory is *temporary*—contents are deleted each time GCCS is started.
- The window lists the directories, or files within a highlighted directory, that meet the filter parameters.

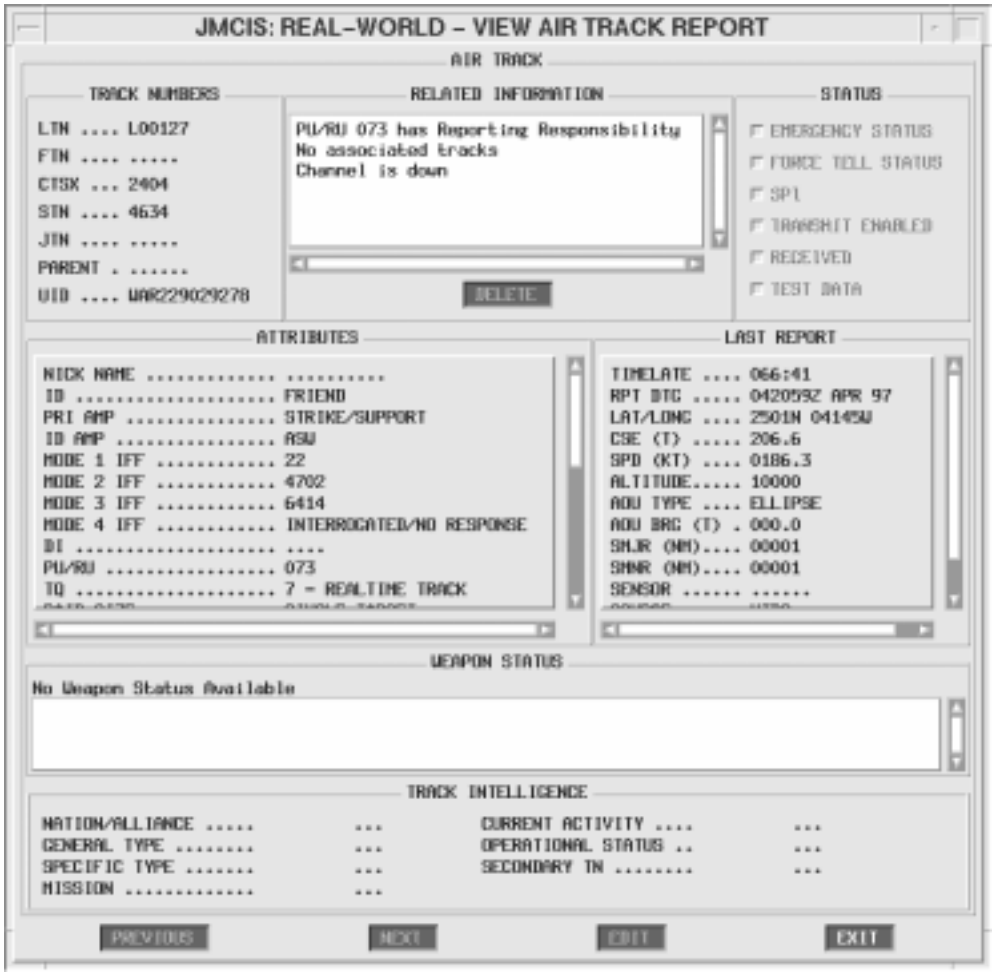
➤ To archive messages:

1. Use the FILTER field to search for directories or files that match filter parameters.
   - To search for directories: enter filter parameters and click FILTER.
   - To search for files within a directory: highlight a directory in the scroll list, enter filter parameters, and click FILTER.

2. In the SELECTION field, enter the path name of the file for the archived messages.
   - Enter a new file name, or select an existing file from the FILES list.
   - If messages are saved in an existing file, the new archive information will overwrite the contents of the file.
3. Click OK to save the file, or CANCEL to discard the process.

VIEW A LINK TRACK

To view further details on any type of Link-11 track, double-click the track on the geodisplay (system CHART window) or EDIT the track after selecting it from the Track Summary window. A view track window similar to the one presented below appears.



While differences in the fields of information provided may occur, the contents of the VIEW window above represent the general look of all Link-11 track VIEW windows.

A few points to note about Link-11 VIEW windows are:

- Fields in the VIEW window cannot be edited.
- Additional fields may appear in some VIEW windows (described in *Additional VIEW Window Fields*).

VIEW WINDOW Pop-up Menus

The following options are available in a pop-up menu in each VIEW window.

ACTIVE OPTIONS:

➤ CENTER—Center the tactical display on the selected track.

➤ DELETE—Delete the track.

➤ EXIT—Close the window and exit the option.

➤ NU-TRK—Create a platform track from the Link track.

➤ PRINT—Print a hardcopy summary of track database information for the selected track.

INACTIVE OPTIONS:

CHANGE CATEGORY, DECORRELATE LOCAL/REMOTE TRK, EDIT, EMERGENCY ON/OFF, FORCE TELL ON/OFF, GO TO PARENT, HELP, NEXT, PREVIOUS, REQUEST IFF UPDATE, REQUEST 19-BIT TN UPDATE, REQUEST NATO TRACK NUMBER UPDATE, SAVE, SEND CLEAR IFF, SEND CLEAR SPECIAL CODE, STOP XMIT, TAKE INTO COMMON STORES (NON-REAL TIME), TAKE INTO COMMON STORES (REAL TIME), and XMIT.

LINK Track Types

The following list of track types is a general list of available Link-11 track types. Specialized implementations of Link-11 may not have all track types available as options.

SURFACE
Track for a surface vessel.

SUBSURFACE
Track for a subsurface vessel.

ASW BEARING
A line of bearing track for Anti-Submarine Warfare (ASW) systems.

ESM
Electronic Support Message (ESM) track.

AREA OF PROBABILITY
Ellipse indicating the probable area a track is located.

SONOBUOY
Track for a sonobuoy.

SPECIAL POINT
Track with special significance, used mostly for hazards, emergencies, or search and rescue.

POINTER
Track of special importance.

NOTACK
Friendly area of "no attack" for a specified length of time.

ACOUSTIC BEARING
Line of bearing track for ASW systems. Reports are generated from passive sonar systems, based on sounds emitted by the track.

AIR
Track for aircraft.

ASW TACTICAL POINT
Track for specific ASW point types, including:

SINKER

BRIEF CONTACT

ASW SEARCH CENTER

SONOBUOY PATTERN CENTER

ASW STATION

CHARTED WRECK

ASW SUBSURFACE STATION

SONOBUOY REFERENCE CENTER

BOTTOMED NON-SUBMARINE

FIX

ESTIMATED POSITION (EP)

Surface

To view a SURFACE Link-11 track, double-click the track on the geodisplay (system CHART window) or EDIT the track after selecting it from the Track Summary window. A VIEW SURFACE TRACK REPORT window appears.

VIEW SURFACE TRACK REPORT WINDOW FIELDS

TRACK NUMBERS Box

LTN
Local UB track number, used internally by the system for track identification.

FTN
FOTC track number.

CTSX
Unique local Link track number, assigned when a track enters the Link.

STN
System track number. This is also known as the Naval Tactical Display System (NTDS) track number.

JTN
TADIL-J track number.

PARENT
Local track number of a Platform track (if the Link track is associated with a Platform track).

UID
Unique identifier for the track: three letters (site reporting the track) followed by a series of numbers (to uniquely identify the track).

RELATED INFORMATION Box

This box lists the following information:

- PU with reporting responsibility.
- Track associations
- AOP relationships
- Controlling relationships
- Identification for this track assigned by other Link channels.

DELETE—This option is currently unavailable.

STATUS Box

While these options are unavailable for modification in VIEW TRACK REPORT windows, the diamond knobs associated with them may, at time, appear as selected. This selection indicates a status assigned by the originating system which transmitted the Link-11 track.

EMERGENCY STATUS
ON—overrides display filters; the track always displays.

OFF—obeys display filters.

FORCE TELL STATUS
ON—overrides display filters; the track always displays.

OFF—obeys display filters.

SPI
Special Processing Indicator.

ON—track derived from intelligence sources.

TRANSMIT ENABLED
Track is selected for transmission.

RECEIVED
Track is received from Link.

TEST DATA
Inactive.

ATTRIBUTES Box

STN
Manually entered System Track Number—overrides system-assigned number.

NICK NAME
Local name for the track.

ID
Link-11 threat ID.

PRI AMP
Primary amplifier.

ID AMP
Further amplification of the identity of the track. Possible entries for this field are determined by the track type.

MODE 1 IFF
Identification Friend or Foe—code which gives a general description of the mission. Mode 1 IFF is for military use.

MODE 2 IFF
Code which provides an exact ID for the platform or track.

This number is used in UB track correlation and is also used with the PIF DON'T CARE and PIF NICKNAMES options from the TRACK TABLES option, found under the TRACKS menu.

MODE 3 IFF
Code describing the type of mission and the general direction of travel. Mode 3 IFF can be commercial, military, or can come from other sources. It can be either friendly or non-friendly.

MODE 4 IFF
Interrogation status.

DI
Discrete Identifier, which is a special four-digit code.

PU/RU
Participating or Reporting Unit. This identifies the reporting source. (This field is view-only.)

TQ
Track quality number as reported in the LINK. Values include NON-REAL-TRACK or a number between 1 and 7. The higher the number, the more accurate the report.

RAID SIZE
Number of objects in track.

OBSERVE TIME
Time track was observed. Field defaults to the current time when this window opens, and may be changed to the actual time the track was observed.

LAST REPORT Box

The LAST REPORT box displays information about the last reported position for the track.

TIMELATE
Amount of time elapsed since report was received.

RPT DTG
Date-time group for the report.

LAT/LONG
Latitude and longitude of the reported position.

GRID POS (NM)
Grid x and y coordinates track is offset from DLRP.

CSE (T)
Course for track in degrees true.

SPD (KT)
Speed of track in knots.

ALTITUDE
Altitude for the track.

AOU TYPE
Area of uncertainty. Default type is an ELLIPSE with semi-major and semi-minor axes of 9 NM each.

AOU BRG (T)
AOU bearing for the track in degrees true.

SMJR (NM)
Semi-major axis length of the ellipse.

SMNR (NM)
Semi-minor axis length of the ellipse.

SENSOR
Sensor type used to pick up the track at its last reported position.

SOURCE
Source code, NTDS, for the track.

XREF
Source cross-reference code for the Command originating the track report.

Subsurface

To view a SUBSURFACE track, double-click the track on the geodisplay (system CHART window) or EDIT the track after selecting it from the Track Summary window. The VIEW SUBSURFACE TRACK REPORT window appears.

VIEW SUBSURFACE TRACK REPORT WINDOW FIELDS:

TRACK NUMBERS Box

The system assigns track numbers when a new track is saved. These fields are view-only. See *Surface Track Report* for a detailed explanation of each field.

RELATED INFORMATION Box

The RELATED INFORMATION box in this window contains fields that are the same as fields in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

STATUS Box

The STATUS box in this window is identical to the STATUS box in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

ATTRIBUTES Box

Many of the fields in the ATTRIBUTES box are the same as those in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

DR TYPE
Data Report Type. Type of subsurface track being reported.

NRT
Indicates if track is being reported in real time or non-real time.

CLASS KIND
Classification of the track.

CLASS AMP
Class amplification.

POSS. SUB
Confidence level of identifying a track which is a possible submarine.

(Time Select Button)
GMT OF ACQSTN/OBSRVTN/EST/COMCNT—Time track was first observed.

CONTACT DURATION—Total continuous contact time.

GMT OF TIME LOST—Time observation was lost.

ASW SENSOR
Sensor used to determine track's characteristics.

DEPTH (QUALITATIVE)
Relative depth of track, such as Estimated Shallow or Periscope Depth.

MISSION
Type of mission, such as Reconnaissance or Escort.

MISSILE CAP
Missile capability, or types of missiles for the track.

LAST REPORT Box

Many of the fields in the LAST REPORT box are the same as those in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

DEPTH
Depth for the track.

ASW Bearing

To view a ASW BEARING track, double-click the track on the geodisplay (system CHART window) or EDIT the track after selecting it from the Track Summary window. The VIEW ASW BEARING TRACK REPORT window appears.

VIEW ASW BEARING TRACK REPORT WINDOW FIELDS:

TRACK NUMBERS Box

The system assigns track numbers when a new track is saved. These fields are view-only. See *Surface Track Report* for a detailed explanation of each field.

RELATED INFORMATION Box

The RELATED INFORMATION box in this window contains fields that are the same as fields in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

STATUS Box

The STATUS box in this window is identical to the STATUS box in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about these fields.

ATTRIBUTES Box

Many of the fields in the ATTRIBUTES box of the VIEW ASW BEARING TRACK REPORT window are the same as those in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

REPORT TYPE
Type of ASW Bearing being reported.

ASW CLASS
Classification of track.

ASW CLASS AMP
Classification amplifier.

SRC FREQ
Source Acoustic Frequency of the bearing.

BROADBAND
Indicates the presence of broadband noise.

SPP
Sound Propagation Path used to detect the acoustic track.

DOPPLER
Doppler associated with the track.

AB LAYER
Indicates if the sonar is above or below the layer.

FREQ 1
Two additional associated acoustic frequencies may be reported for an ASW Bearing Track. This displays the first of the associated frequencies.

FREQ 2
Second associated frequency.

ASW SENSOR
Sensor used to determine the characteristics of the track.

BEARING DRIFT
Direction of change (drift) of the track.

BEARING ACCURACY
Accuracy, in degrees, of the bearing track. The accuracy is equal to or better than the value displayed in this field.

BEARING 1
Bearing of the track.

BEARING 2
A second bearing for the track displays if an ambiguous bearing report exists.

TIME ESTABLISHED
Time track was first reported.

AUDIO PRESENCE
Indicates if audio is present for the track.

TN ORIGINATOR
Track number of the unit originating the bearing report. Shown only if the originating unit is not the reporting unit.

SENSOR DEPTH
Reported sensor depth in 100-foot increments.

CONTACT DEPTH
Depth of contact, such as Estimated shallow or Bottomed.

RANGE (YDS)
Distance to reported contact , in 250 yard increments.

RANGE ACCURACY (MI)
Range accuracy in five-mile increments.

LAST REPORT Box

Many of the fields in the LAST REPORT box are the same as those in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

DEPTH
Depth for the track.

Electronic Support Message (ESM)

To view a ESM track, double-click the track on the geodisplay (system CHART window) or EDIT the track after selecting it from the Track Summary window. The VIEW ESM MESSAGE REPORT window appears.

VIEW ESM MESSAGE REPORT WINDOW FIELDS:

TRACK NUMBERS Box

The system assigns track numbers when a new track is saved. These fields are view-only. See *Surface Track Report* for a detailed explanation of each field.

RELATED INFORMATION Box

The RELATED INFORMATION box in this window contains fields that are the same as fields in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

STATUS Box

The STATUS box in this window contains fields that are the same as fields in the STATUS box in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about these fields.

ATTRIBUTES Box

Many of the fields in the ATTRIBUTES box of the VIEW ESM MESSAGE REPORT window are the same as those in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

KIND
Kind of report.

BROAD CLASS
Broad classification of the emitter.

AMP CHAR
Amplifying characteristics of the emitter.

BEARING
Bearing of the track.

BEARING ACCURACY
Accuracy, in degrees, of the bearing track. The accuracy is equal to or better than the value displayed in this field.

PLATFORM
Platform type.

FREQUENCY (Hz)
Frequency measured in Hz.

FREQ RANGE
Range of frequency.

JITTER
Indicates presence of jitter.

SCAN CHAR
Scan characterization.

PRF (Hz)
Pulse Repetition Frequency measured in Hz.

ANT POLARIZATION
Antenna polarization.

PULSE WIDTH (uSec)
Pulse width measured in microseconds.

SCAN PERIOD/SCAN RATE
Antenna scan information. Either seconds per scan (period) or frequency range (rate).

EMITTER NUMBER
Number indicating a specific emitter.

PLATFORM NUMBER
Number indicating the emitter platform.

TIME STALE
Time since report was updated.

PLAT EVAL CONF
Platform Evaluation Confidence—level of confidence that the attribute values displayed are accurate.

CONFIDENCE
Degree of confidence of the reported emitter evaluation.

LAST REPORT Box

The LAST REPORT box is identical to the LAST REPORT box in the VIEW SURFACE TRACK REPORT window and is described in *Surface Track Report*.

Area of Probability (AOP)

To view a AREA OF PROBABILITY track, double-click the track on the geodisplay (system CHART window) or EDIT the track after selecting it from the Track Summary window. The VIEW AREA OF PROBABILITY REPORT window appears.

VIEW AREA OF PROBABILITY REPORT WINDOW FIELDS:

TRACK NUMBERS Box

The system assigns track numbers when a new track is saved. These fields are view-only. See *Surface Track Report* for a detailed explanation of each field.

RELATED INFORMATION Box

The RELATED INFORMATION box in this window contains fields that are the same as fields in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

STATUS Box

The options in the STATUS box are inactive.

ATTRIBUTES Box

Many of the fields in the ATTRIBUTES box of the VIEW AREA OF PROBABILITY REPORT window are the same as those in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

CATEGORY
Track category.

SOURCE
Source of the report.

RELATED TN
Related local Link-11 track number for a Link track, point, bearing, or fix.

TIME OF UPDATE
Time the last report was received for this track.

PROBABILITY FACTOR
Level of confidence that track is within the area of probability.

EXPANSION/CONTRACTION
Indicates if Area of Probability is expanding or contracting.

X/C RATE (KTS)
Rate, in knots, at which the Area of Probability is expanding or contracting.

LAST REPORT Box

Many of the fields in the LAST REPORT box are the same as those in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

AOU TYPE
Area of uncertainty—ELLIPSE or BBOX (Bearing Box).

ELLIPSE—associated fields are SMJR (semi-major) and SMNR (semi-minor) axes.

BBOX—associated fields are LEN (length) and H-WDTH (half-width).

Sonobuoy

To view a SONOBUOY track, double-click the track on the geodisplay (system CHART window). The VIEW SONOBUOY REPORT window appears.

VIEW SONOBUOY TRACK REPORT WINDOW FIELDS:

TRACK NUMBERS Box

The system assigns track numbers when a new track is saved. These fields are view-only. See *Surface Track Report* for a detailed explanation of each field.

RELATED INFORMATION Box

The RELATED INFORMATION box in this window contains fields that are the same as fields in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

STATUS Box

The STATUS box in this window contains fields that are the same as fields in the STATUS box in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

ATTRIBUTES Box

Many of the fields in the ATTRIBUTES box are the same as those in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

REPORT TYPE
Sonobuoy report type. This field is view-only.

DEPTH
Depth sonobuoy is suspended below surface.

CHANNEL NUMBER
Sonobuoy channel number.

CONTACT STATUS
Indicates active or inactive sonobuoy.

TRANSDUCER
Type of sonobuoy.

TIME REMAINING
Time remaining before sonobuoy expires.

(Time Select Button)
GMT OF ACQSTN/OBSRVTN/EST/COMCNT—time track was first observed.

GMT OF TIME LOST—time observation was lost.

TIME LOST
Elapsed time since sonobuoy contact was lost (from 5 to 360 minutes).

CALIBRATION STATUS
Calibration status of the sonobuoy, either Calibrated or No Statement.

LAST REPORT Box

The LAST REPORT box is identical to the LAST REPORT box in the VIEW SURFACE TRACK REPORT window and is described in *Surface Track Report*.

Special Point

To view a SPECIAL POINT track, double-click the track on the geodisplay (system CHART window) or EDIT the track after selecting it from the Track Summary window. The VIEW SPECIAL POINT REPORT window appears.

VIEW SPECIAL POINT REPORT WINDOW FIELDS:

TRACK NUMBERS Box

The system assigns track numbers when a new track is saved. These fields are view-only. See *Surface Track Report* for a detailed explanation of each field.

RELATED INFORMATION Box

The RELATED INFORMATION box in this window contains fields that are the same as fields in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

STATUS Box

The STATUS box in this window is identical to the STATUS box in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

ATTRIBUTES Box

Many of the fields in the ATTRIBUTES box are the same as those in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

PT TYPE
Point type.

PT AMPLIFY
Amplifies point type.

(Time Select Button)
GMT OF INITIAL OBSERVATION—time track was first observed.

GMT OF OBSERVATION/INFORMATION—time of updated information.

LAST REPORT Box

Many fields in the LAST REPORT box are identical to those in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

ALT/DEPTH
Altitude or depth of the track.

Pointer

To view a POINTER track, double-click the track on the geodisplay (system CHART window) or EDIT the track after selecting it from the Track Summary window. The VIEW POINTER REPORT window appears.

VIEW POINTER TRACK REPORT WINDOW FIELDS:

TRACK NUMBERS Box

The system assigns track numbers when a new track is saved. These fields are view-only. See *Surface Track Report* for a detailed explanation of each field.

RELATED INFORMATION Box

The RELATED INFORMATION box in this window contains fields that are the same as fields in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

STATUS Box

The options in the STATUS box are inactive.

ATTRIBUTES Box

NICK NAME
Local name for the track.

ORIGINATOR
Unit address of pointer where report originated. This field is view-only. It is set to ownship's STN.

ADDRESSEE
Unit address to receive the pointer. The list of available PUs is generated by the PUs currently reporting on the network.

OPERATOR
Specific operator within a unit to receive the pointer.

LAST REPORT Box

The LAST REPORT box is identical to the LAST REPORT box in the VIEW SURFACE TRACK REPORT window and is described in *Surface Track Report*.

NOTACK

To view a NOTACK track, double-click the track on the geodisplay (system CHART window). The VIEW NOTACK REPORT window appears.

VIEW NOTACK TRACK REPORT WINDOW FIELDS:

TRACK NUMBERS Box

The system assigns track numbers when a new track is saved. These fields are view-only. See *Surface Track Report* for a detailed explanation of each field.

RELATED INFORMATION Box

The RELATED INFORMATION box in this window contains fields that are the same as fields in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

STATUS Box

The STATUS box in this window is identical to the STATUS box in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

ATTRIBUTES Box

Many of the fields in the ATTRIBUTES box are the same as those in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

RADIUS
Radius of the notack area.

START
Start time of notack area designation.

DURATION
Total time of notack area designation.

LAST REPORT Box

The LAST REPORT box is identical to the LAST REPORT box in the VIEW SURFACE TRACK REPORT window and is described in *Surface Track Report*.

Acoustic Bearing

To view a ACOUSTIC BEARING track, double-click the track on the geodisplay (system CHART window) or EDIT the track after selecting it from the Track Summary window. The VIEW ACOUSTIC BEARING REPORT window appears.

VIEW ACOUSTIC BEARING TRACK REPORT WINDOW FIELDS:

TRACK NUMBERS Box

The system assigns track numbers when a new track is saved. These fields are view-only. See *Surface Track Report* for a detailed explanation of each field.

RELATED INFORMATION Box

The RELATED INFORMATION box in this window contains fields that are the same as fields in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

STATUS Box

The STATUS box in this window contains fields that are the same as fields in the STATUS box in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

ATTRIBUTES Box

Many of the fields in the ATTRIBUTES box are the same as those in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

BEARING 1
AOU bearing.

TIME ESTABLISHED
Time track was established.

ERR
AOU bearing error.

RNG
AOU bearing range.

LAST REPORT Box

Many of the fields in the LAST REPORT box are the same as the LAST REPORT fields in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

DEPTH
Depth for the track.

Air

To view a AIR track, double-click the track on the geodisplay (system CHART window) or EDIT the track after selecting it from the Track Summary window. The VIEW AIR REPORT window appears.

VIEW AIR TRACK REPORT WINDOW FIELDS:

TRACK NUMBERS Box

The system assigns track numbers when a new track is saved. These fields are view-only. See *Surface Track Report* for a detailed explanation of each field.

RELATED INFORMATION Box

The RELATED INFORMATION box in this window contains fields that are the same as fields in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

STATUS Box

The STATUS box in this window contains fields that are the same as fields in the STATUS box in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

ATTRIBUTES Box

Many of the fields in the ATTRIBUTES box are the same as those in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

CONTROLLING TN
Track in control of aircraft.

HEIGHT SOURCE
Source of height report.

LAST REPORT Box

Many of the fields in the LAST REPORT box are the same as the LAST REPORT fields in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

ALTITUDE
Altitude for the track.

ASW Tactical Point

To view a ASW TACTICAL POINT track, double-click the track on the geodisplay (system CHART window) or EDIT the track after selecting it from the Track Summary window. The VIEW ASW TACTICAL POINT REPORT window appears.

VIEW ASW TACTICAL POINT TRACK REPORT WINDOW FIELDS:

TRACK NUMBERS Box

The system assigns track numbers when a new track is saved. These fields are view-only. See *Surface Track Report* for a detailed explanation of each field.

RELATED INFORMATION Box

The RELATED INFORMATION box in this window contains fields that are the same as fields in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

STATUS Box

The STATUS box in this window contains fields that are the same as fields in the STATUS box in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

ATTRIBUTES Box

Many of the fields in the ATTRIBUTES box are the same as those in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

NRT
Indicates if track is being reported in real time or non-real time.

ASW PT TYPE
Type of ASW point.

CLASS KIND
Classification of the track.

CLASS AMP
Class amplification.

POSS. SUB
Confidence level of identifying a track which is a possible submarine.

(Time Select Button)
GMT OF ACQSTN/OBSRVTN/EST/COMCNT—time track was first observed.

GMT OF TIME LOST—time observation was lost.

ASW SENSOR
Type of ASW sensor.

LAST REPORT Box

The LAST REPORT box is identical to the LAST REPORT box in the VIEW SURFACE TRACK REPORT window and is described in *Surface Track Report*.

Electronic Control Message (ECM) INTERCEPT REPORT

To view a ECM track, double-click the track on the geodisplay (system CHART window) or EDIT the track after selecting it from the Track Summary window. The VIEW ECM REPORT window appears.

ECM INTERCEPT REPORT WINDOW FIELDS:

TRACK NUMBER Box

The system assigns track numbers when a new track is saved. These fields are view-only. See *Surface Track Report* for a detailed explanation of each field.

ATTRIBUTES Box

Many of the fields in the ATTRIBUTES box are the same as those in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

BROAD CLASS
Broad classification of the emitter.

AMP CHAR
Amplifying characteristics of the emitter.

BEARING
Bearing for the track.

TN ORIG
Track number of the unit that originated the report.

PLATFORM
Displays platform type.

FREQUENCY (Hz)
Frequency in Hz.

ELEVATION ANGLE
Elevation of intercept.

JRSL
Jammer received signal level.

STATUS Box

The STATUS box in this window contains fields that are the same as fields in the STATUS box in the VIEW SURFACE TRACK REPORT window. See *Surface Track Report* for information about this box.

LAST REPORT Box

Many of the fields in the LAST REPORT box are the same as the LAST REPORT fields in the VIEW SURFACE TRACK REPORT window and are described in *Surface Track Report*. The fields that are unique to this window are described below.

ERR
AOU bearing error.

RNG
AOU bearing range.

Additional VIEW Window Fields

Listed below are additional window fields which may appear in different types of Link-11 track VIEW TRACK REPORT windows. Where appropriate, the Box location where they appear has been noted.

WEAPON STATUS Box

Displays weapon status set in WEAPON STATUS option.

TRACK INTELLIGENCE Box

NATION/ALLIANCE
Country affiliation.

GENERAL TYPE
Amplification of reported category.

SPECIFIC TYPE
Amplification of general type.

MISSION
Type of mission.

CURRENT ACTIVITY
Action currently performing.

OPERATIONAL STATUS
Weapons or facility status.

SECONDARY TN
Track number of mission object.

ATTRIBUTES Box

ALTITUDE FOR WATCH
Best altitude for radar watch.

ASW AIRCRAFT TYPE
Type of ASW aircraft.

CATEGORY
Track category.

FUEL
Increments of burnable fuel aboard aircraft.

Inventory Fields
Number of useable weapons, including:

DEPTH BOMB INV (CONV)

DEPTH BOMB INV (SPCL)

TORPEDO INV (CONV)

TORPEDO INV (SPCL)

MISSILE INV (CONV))

MISSILE INV (SPCL)

ROCKET INV

SONOBUOY INV (ACTIVE))

SONOBUOY INV (PASSIVE)

POINT
Type of point.

POINT AMP
Amplifying characteristics of the point.

RECEIVE QUALITY
Receive quality for the track.

Sensor Status Fields
Status of various sensors, either OPERATIONAL or NOT OPERABLE. Sensors include:

RADAR

INFRA RED

LOFAR

MAD

SEARCH LIGHT

LLLTV

DIFAR

SONOBUOY RECEIVER

RECORDER 1

RECORDER 2

RECORDER 3

RECORDER 4

SONAR

DICASS

CASS

ADP 1

ADP 2

TIME REMAINING
Time remaining until aircraft is due to depart.

TIME TO BINGO
Time to return to base.

UNIT
Participating unit type.

Weapons Capability Fields
Fields that indicate weapons capability include:

ALL ASPECT ANGLE

MULTIPLE INTERCEPT

NUCLEAR CAPABLE

ORDINANCE

REAR ASPECT

Appendix A: Acronyms

ADP	Automatic Data Processing
ALT	Altitude
AMP	Amplification
AMP CHAR	Amplifying Characteristics
AOP	Area of Probability
AOU	Area of Uncertainty
ACQSTN	Acquisition
ASW	Anti-Submarine Warfare
ATDL1	Army tactical data link 1
BBOX	Bearing Box
BRG	Bearing
CANTCO	Can't Comply
CANTPRO	Can't Process
CAT/THREAT	Category and Threat
CASS	Command Active Sonobuoy System
COMCNT	Commencement
COMMS	Communications
CONV	Conventional
CSE	Course
CTSX	Central Track Store Index
DI	Discrete Identifier
DICASS	Directional Command Active Sonobuoy System
DIFAR	Directional Finding and Ranging
DLRP	Data Link Reference Point

DR TYPE	Data Report Type
DTG	Date-time Group
DTS	Data Terminal Set
ECM	Electronic Control Message
EF	External Functions
EP	Estimated Position
ESM	Electronic Support Message
EST	Established
FTN	FOTC Track Number
GC	Great Circle
GCCS	Global Command and Control System
GEO	Geographic
GMT	Greenwich Mean Time
H-WDTH	Half-width
ID	Identification
ID AMP	Identity Amplifier
IFF	Identification Friend or Foe
INV	Inventory
JMCIS	Joint Maritime Command Information System
JRSL	Jammer received signal level
JTN	TADIL-J Track Number
LAT/LONG	Latitude and Longitude
LOFAR	Low-Frequency Acquisition and Ranging
LLLTV	Low-Light-Level Television
MAD	Magnetic Anomaly Detection
NAV	Naval
NCT	Net Cycle Time

LTN	Local Track Number
NRT	Non-real Time
NTDS	Naval Tactical Data System; Naval Tactical Display System
NU-TRK	New Track
OBSRVTN	Observation
ORIG	Origin
PIF	Pseudo Identification Feature ; Personal Identification Feature
POFA	Programmed Operational Functional Appraisal
PRF	Pulse Repetition Frequency
PRI AMP	Primary Amplifier
PT AMPLIFY	Point Amplify
PT TYPE	Point Type
PTR	Prepare To Receive
PTT	Prepare To Transmit
PU	Participating Unit
PU/RU	Participating Unit or Reporting Unit
RECV	Receive
REF	Reference
RE-XMIT	Retransmit
RL	Rhumbline
RNG	Range
SMJR	Semi-major (axis)
SMNR	Semi-minor (axis)
SPCL	Special
SPD	Speed
SPI	Special Processing Indicator
SPP	Sound Propagation Path

SRC FREQ	Source Frequency
SSN	Nuclear Submarine
STN	System Track Number
TADIL	Tactical Data Link; Tactical Digital Information Link
TN	Track Number
TQ	Track Quality
TRK	Track
UB	Unified Build
UID	Unique Identifier
USMC	United States Marine Corps
WILCO	Will Comply
XMIT	Transmit
XREF	Cross-reference